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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,150	01/11/2006	Hsuan-ming Shih	066733-0102	6117
23428 7590 12/05/2008 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER SNYDER, STEVEN G	
			ART UNIT 2184	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/564,150

**Applicant(s)**

SHIH, HSUAN-MING

**Examiner**

STEVEN G. SNYDER

**Art Unit**

2184

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 6, 8-10 and 13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3, 6, 8-10 and 13 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

This is in response to communication filed on September 22, 2008.

***Status of Claims***

Claims 1 - 3, 6, 8 - 10, and 13 are pending, of which claim 1 is in independent form.

***Response to Arguments***

1. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues, on pages 7 - 8, the newly added limitation of configuration information defining position, order, and pattern of data to be exchanged.

Since this limitation was not previously claimed, these arguments are moot, as stated above. Further, there is no further definition in the specification of the claimed position, order, and pattern. Therefore, the examiner will treat these limitations with the broadest reasonable interpretation.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 1 - 3, 6, 8 - 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deng et al., U.S. Patent Application 2003/0005278 (hereinafter referred to as Deng) in view of Chang, U.S. Patent Application 2004/0125782 (hereinafter referred to as Chang).**

**Referring to claim 1,** Deng discloses "A method for a data processing device exchanging data with a computer" ([0010] and Fig. 1, a semiconductor storage device connected to host computer system via an interface), "said data processing device including a standard data interface, a control module and a storage module" (Fig. 1, a storage device with general-purpose interface 21, control module 22, and storage medium module 1); "the standard data interface used for connecting the data

processing device with the computer" (Fig. 1, general purpose interface 21), "and the control module used for controlling reading and writing from or to the storage module and exchanging data with the computer" ([0010], a storage device realizing floppy disk, CD-ROM, or ZIP disk protocol and implementing the storing function. Also, Fig. 1, control module 22 connected to storage medium module 1 via a bidirectional connection for reading and writing); "when said data processing device is connected with the computer under a running-state through the standard data interface or when an operation system of the computer connected with said data processing device starts, said computer communicating with the control module based on said standard data interface" ([0010], a storage device capable of hot plug in/out and being removably connected to the host through the general purpose interface), "and carrying on the steps of: step 1, said computer sending an enquiring message of the data processing device's type to said data processing device" ([0057] - [0058], the inquiry command); "step 2, after receiving the enquiring message of the data processing device's type, said control module sending a data processing device's type information of said data processing device to the computer" ([0057], the control module returns the configuration information of the device and sets the bit for its device

class). Deng also discloses "setting a device attribute" ([0051], commands such as SET ADDRESS and SET FEATURE).

Deng also discloses "one or a plurality of data storage areas are setup in said storage module for storing configuration information and/or data to be exchanged, and storing the configuration information about the data storage areas" ([0096] and Fig. 4, the storage of the device can be split into a plurality of storage spaces. One or more of the spaces may be setup as a buffer area and special information areas may contain information about the storage device); "and said step 5 further comprises: the computer communicating with the data processing device, parsing said stored configuration information and exchanging data with the computer in accordance with the configuration information (Fig. 5, configuration information is used to select which protocol will be followed so that the commands of the host are understood by the device).

Deng does not appear to explicitly disclose "informing the computer that the data processing device is the data processing device with an auto-run function or without the auto-run function" or "step 3, after said computer receiving said data processing device's type information, if the data processing device's type information indicates that the data processing

device is the data processing device with the auto-run function, then said computer setting a device attribute of said data processing device to the data processing device with the auto-run function, and accessing said data processing device according to corresponding access specifications, then carrying on step 4, else carrying on step 5" or "step 4, if the computer finds an auto-running file stored in the data processing device, then the computer performs the auto-run function according to a script in the auto-running file, else the operation on the data processing device is finished until next access operation to said data processing device" or "step 5, said computer setting the device attribute of said data processing device to the data processing device without the auto-run function, finishing the operation on the data processing device until next access operation to said data processing device."

However, Chang discloses a device 200 including memory 130 that contains file storage 150 as well as program memory 140 (Fig. 2). Chang further discloses "accessing said data processing device according to corresponding access specifications" (Fig. 4, memory 130 including public 150 and private 140 sections).

Chang also states how all of the software components required are embedded in the device itself and can be

automatically launched, installed, and executed, such as through an AutoRun process ([0007]). Also, Chang discloses the alternative scenario where a user must install drivers and other applications in order to establish communications ([0066]). Chang further states that an optional control switch 165 can be used to activate, deactivate, control, or adjust one or more functions provided by the device ([0037] and [0068]).

Therefore, although neither Deng nor Chang appears to explicitly disclose turning on or off an autorun function, based on Chang's disclosure, it would have been obvious to one of ordinary skill in the art at the time of the invention to allow the switch described by Chang to activate or deactivate the autorun capabilities of the device.

Chang also discloses how information including the type of connected device is sent to the computing system ([0110]). Chang further discloses establishing communications, which may include negotiating service options via a graphical user interface or switch settings ([0058]).

Therefore, although neither Deng nor Chang appears to explicitly disclose sending information about the device's autorun capabilities, it would have been obvious to one of ordinary skill in the art at the time of the invention to include this information. The motivation would have been to



configure the communications. If the device has an autorun function, that function can configure the communications, but if there is no autorun function, communications must be configured by other means. Therefore, the computing system must be made aware of the presence or absence of the autorun function.

Deng and Chang are analogous art because they are from the same field of endeavor, which is peripheral devices communicating with computing devices.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Deng and Chang before him or her, to modify the teachings of Deng to include the teachings of Chang so that a switch could be used to enable and/or disable an autorun function of a device.

The motivation for doing so would have been to provide flexibility so that the two alternative scenarios described by Chang in paragraph [0066] would be allowed.

Deng also does not appear to explicitly disclose an autorun function that "concretely depicts that said computer accesses programs to be run by the script according to the script in the auto-running file and executes them in the order specified in the auto-running file."

However, Chang discloses a pointer being sent to the host computing device. This pointer would point to a setup file in the memory 130 and the computing device would be instructed to run an application stored in memory 130 ([0067]).

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Deng and Chang before him or her, to modify the teachings of Deng to include the teachings of Chang so that the auto-run function concretely depicts the programs to be run and the order to run the programs.

The motivation for doing so would have been to provide the host with information required to allow for flexibility so that the two alternative scenarios described by Chang in paragraph [0066] would be allowed.

Further, Deng does not appear to explicitly disclose the "programs are stored in the storage module of said data processing device and/or stored in other storage devices of said computer."

However, Chang discloses all of the software components required are embedded in the device itself and can be automatically launched, installed, and executed, such as through an AutoRun process ([0007] and Fig. 2).

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Deng and Chang before him or her, to modify the teachings of Deng to include the teachings of Chang so that the auto-run programs are stored in the device.

The motivation for doing so would have been to provide for flexibility so that the two alternative scenarios described by Chang in paragraph [0066] would be allowed.

Finally, neither Deng nor Chang appears to explicitly disclose "exchanging data with the computer in accordance with the position, exchanging order and exchanging pattern of the data defined by the configuration information."

However, as stated above, there is no further definition in applicant's specification describing position, exchanging order, or exchanging pattern of data to be exchanged. Therefore, Deng and Chang's use of addresses is considered to be equivalent to applicant's claimed position. Further, Deng discloses converting logical addresses to physical addresses ([0041]). Finally, Deng discloses configuration information is used to select which protocol will be followed (Fig. 5). Also, in paragraphs [0054] and [0067], Deng discloses following a CBI protocol (control/bulk/interrupt) or a BulkOnly protocol. These paragraphs also disclose steps followed for each protocol when

used to transfer data. Therefore, this is considered to be equivalent to an exchanging order and an exchanging pattern.

Therefore, it would have been obvious to combine Chang with Deng to obtain the invention as specified in the instant claim.

**As per claim 2**, Deng does not appear to disclose "a control switch is set in said data processing device for controlling a start or stop of the auto-run function of said data processing device."

However, Chang states how all of the software components required are embedded in the device itself and can be automatically launched, installed, and executed, such as through an AutoRun process ([0007]). Also, Chang discloses the alternative scenario where a user must install drivers and other applications in order to establish communications ([0066]). Chang further states that an optional control switch 165 can be used to activate, deactivate, control, or adjust one or more functions provided by the device ([0037] and [0068]).

Therefore, although neither Deng nor Chang appears to explicitly disclose turning on or off an autorun function using a control switch, based on Chang's disclosure it would have been obvious to one of ordinary skill in the art at the time of the

invention to allow the switch described by Chang to activate or deactivate the autorun capabilities of the device.

Also, neither Deng nor Chang appears to explicitly disclose "in said step 2, after receiving the enquiring message of the data processing device's type, the control module checks whether a state of said control switch is representing the start of the auto-run function or not, if "yes", then the control module responds the data processing device's type message to the computer and informs the computer that the data processing device is the data processing device with auto-run function, else the control module responds with the data processing device's type message to the computer and informs the computer that the data processing device is the data processing device without the auto-run function."

However, Deng discloses the host sending an inquiry command to the device ([0057] - [0058]) and the device responding to the inquiry ([0057], the control module returns the configuration information of the device and sets the bit for its device class). Also, Chang discloses how information including the type of connected device is sent to the computing system ([0110]). Chang further discloses establishing communications, which may include negotiating service options via a graphical user interface or switch settings ([0058]).

Therefore, although neither Deng nor Chang appears to explicitly disclose sending information about the device's autorun capabilities in response to a query of the device's type, it would have been obvious to one of ordinary skill in the art at the time of the invention to include this information.

The motivation would have been to configure the communications. If the device has an autorun function, that function can configure the communications, but if there is no autorun function, communications must be configured by other means. Therefore, the computing system must be made aware of the presence or absence of the autorun function.

Deng and Chang are analogous art because they are from the same field of endeavor, which is peripheral devices communicating with computing devices.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Deng and Chang before him or her, to modify the teachings of Deng to include the teachings of Chang so that a switch could be used to enable and/or disable an autorun function of a device, and this information would be supplied to a host when a connection is made.

The motivation for doing so would have been to provide the host with information required to allow for flexibility so that

the two alternative scenarios described by Chang in paragraph [0066] would be allowed.

Therefore, it would have been obvious to combine Chang with Deng to obtain the invention as specified in the instant claim(s).

**As per claim 3**, neither Deng nor Chang appears to explicitly disclose storing control data to represent the start or stop of an auto-run function.

However, Chang discloses a pointer being sent to the host computing device. This pointer would point to a setup file in the memory 130 and the computing device would be instructed to run an application stored in memory 130 ([0067]). Also, it is known in the art that the status of switches can be read and stored in a register or other form of memory.

Deng and Chang are analogous art because they are from the same field of endeavor, which is peripheral devices communicating with computing devices.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Deng and Chang before him or her, to modify the teachings of Deng to include the teachings of Chang so that a switch could be used to

enable and/or disable an autorun function of a device, and this information would be supplied to a host when a connection is made.

The motivation for doing so would have been to provide the host with information required to allow for flexibility so that the two alternative scenarios described by Chang in paragraph [0066] would be allowed.

Therefore, it would have been obvious to combine Chang with Deng to obtain the invention as specified in the instant claim(s).

The remaining limitations of this claim are equivalent to the limitations of claim 2. Therefore, the rejection to claim 2 applies to claim 3 as well.

**As per claim 6**, Deng discloses "a secure storage area is set in said storage module, the secure storage area is set to a state which can not be displayed and/or modified by the computer, said auto-running file and/or said program are stored in the secure storage area" ([0015] and [0016], the storage of the device can be write protected and can also store programs).



**As per claim 8**, Deng discloses "the standard data interface of said data processing device is USB interface or IEEE1394 interface" ([0004], the interface channels between the device and the host are universal interface channels, such as USB and IEEE1394).

**As per claim 9**, Deng discloses "data processing device with auto-run function is a CD driver ([0010], the device can simulate and implement the storing function of the CD-ROM working on the CD-ROM drive).

Deng does not appear to explicitly disclose a floppy disk, hard disk, or flash based storage device *without an auto-run function*.

However, Chang discloses how all of the software components required are embedded in the device itself and can be automatically launched, installed, and executed, such as through an AutoRun process ([0007]). Also, Chang discloses the alternative scenario where a user must install drivers and other applications in order to establish communications ([0066]). Chang further states that an optional control switch 165 can be used to activate, deactivate, control, or adjust one or more functions provided by the device ([0037] and [0068]).

Therefore, although neither Deng nor Chang appears to explicitly disclose turning on or off an autorun function, based on Chang's disclosure, it would have been obvious to one of ordinary skill in the art at the time of the invention to allow the switch described by Chang to activate or deactivate the autorun capabilities of the device.

Deng and Chang are analogous art because they are from the same field of endeavor, which is peripheral devices communicating with computing devices.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Deng and Chang before him or her, to modify the teachings of Deng to include the teachings of Chang so that the device would be a CD driver with an auto-run function.

The motivation for doing so would have been to provide flexibility so that the two alternative scenarios described by Chang in paragraph [0066] would be allowed.

Therefore, it would have been obvious to combine Chang with Deng to obtain the invention as specified in the instant claim(s).

**As per claim 10**, Deng discloses the "data processing device without auto-run function is a floppy disk, hard disk or flash-based storage device" ([0010], the device can simulate and implement the floppy disk working on the floppy disk drive).

It is noted, however, that Deng does not specifically teach a floppy disk, hard disk, or flash based storage device without an auto-run function.

However, Chang discloses how all of the software components required are embedded in the device itself and can be automatically launched, installed, and executed, such as through an AutoRun process ([0007]). Also, Chang discloses the alternative scenario where a user must install drivers and other applications in order to establish communications ([0066]). Chang further states that an optional control switch 165 can be used to activate, deactivate, control, or adjust one or more functions provided by the device ([0037] and [0068]).

Therefore, although neither Deng nor Chang appears to explicitly disclose turning on or off an autorun function, based on Chang's disclosure, it would have been obvious to one of ordinary skill in the art at the time of the invention to allow the switch described by Chang to activate or deactivate the autorun capabilities of the device.

Deng and Chang are analogous art because they are from the same field of endeavor, which is peripheral devices communicating with computing devices.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Deng and Chang before him or her, to modify the teachings of Deng to include the teachings of Chang so that the device would be a floppy disk, hard disk, or flash based storage device without an auto-run function

The motivation for doing so would have been to provide flexibility so that the two alternative scenarios described by Chang in paragraph [0066] would be allowed.

Therefore, it would have been obvious to combine Chang with Deng to obtain the invention as specified in the instant claim(s).

**As per claim 13**, Deng discloses "A method for a data processing device exchanging data with a computer" ([0010] and Fig. 1, a semiconductor storage device connected to host computer system via an interface). Deng also discloses the storage of the device can be split into a plurality of storage spaces. One or more of the spaces may be setup as a buffer area

and special information areas may contain information about the storage device ([0096] and Fig. 4).

Deng does not appear to explicitly disclose the "wherein one or a plurality of startup data areas are setup in said storage module for storing said auto-running file and/or a program respectively, said step 1 to step 5 are executed respectively for each of the startup data areas."

However, Chang discloses all of the software components required are embedded in the device itself and can be automatically launched, installed, and executed, such as through an AutoRun process ([0007] and Fig. 2).

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Deng and Chang before him or her, to modify the teachings of Deng to include the teachings of Chang so that the auto-run programs are stored in the device.

The motivation for doing so would have been to provide for flexibility so that the two alternative scenarios described by Chang in paragraph [0066] would be allowed.

Therefore, it would have been obvious to combine Chang with Deng to obtain the invention as specified in the instant claim.

***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Application **2003/0131173** discloses communications between a host and a PCI device.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN G. SNYDER whose telephone number is (571)270-1971. The examiner can normally be reached on Mon. - Thurs. 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Henry Tsai can be reached on (571) 272-4176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S.S.

**/Henry W.H. Tsai/  
Supervisory Patent Examiner, Art Unit 2184**